THE SOURCE

NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM
ON THE WEB AT WWW.DES.STATE.NH.US/DWSPP

FALL 2003

Improving the Source Water Protection Grant Program

Local Source Water Protection Grant recipients will notice a slight change in the program as a result of a recent survey. Since 1997, DES has awarded $1.2 million for over 90 source water protection projects. As the program enters its seventh round, DES wanted to evaluate the program's effectiveness. To do so, a survey was mailed to past grant recipients asking them about their experience with the program.

The results of the survey showed a high level of satisfaction with the program. We were encouraged to hear that our mailings, staff, and newsletter are effective at getting the word out about the program. In addition, grant recipients reported that our staff, as well as town officials and consultants, were helpful in developing grant project ideas. Another positive response was that many of the projects accomplished more than one type of result. For instance, nearly two-thirds of the projects improved the systems' understanding of threats and involved implementation of protection measures. Over 60 percent of respondents were happy with the handling of their project. However, 19 percent felt that they could have used some additional help from outside groups or DES. In the end, all but one said they would consider applying again in the future.

In response to the results, DES will continue to improve the program. As a first step, we will make quarterly phone calls to recipients currently working on a grant project to check progress and offer assistance. In addition, we will increase our efforts to familiarize people with the availability of the grants and the range of projects that are eligible.

The 2004 grant applications were mailed to water systems, regional planners and consultants the first week in August and are due **November 21, 2003.** If you have questions regarding the grant program or suggestions for improvement, please contact Johnna McKenna at 271-7017 or jmckenna@des.state.nh.us.

Water System Security News

Free Vulnerability Assessment Training Coming to NH

Keep a look out for the Vulnerability Assessment training registration in your mailbox. Custer Battles, a widely respected security consulting firm, will be providing free vulnerability assessment, emergency planning and security enhancement training to aid community systems serving 3,300 people or more in their requirement to submit a vulnerability assessment to EPA by June 30, 2004 (as required by the 2002 Bioterrorism Act). The three-day workshops will be held in Littleton, Keene, Hanover, Portsmouth and Concord beginning in October. Training schedules are being mailed to systems and are on our website at www.des.state.nh.us/wseb/EmergencyPlanning/index.asp?TheLink=vaassist.

If you have any questions, please contact Johnna McKenna at 271-7017 or jmckenna@des.state.nh.us.

Apply for Password and PIN to Use DES OneStop GIS

DES's OneStop GIS site, offering Internet access to DES's geographic information system, has been changed to enhance the security of information regarding the location of public water supply (PWS) sources and dams. Most of the data layers are available to all users, but users must now obtain a password and PIN to access PWS and dam information. Processing of password/PIN requests may take a few days, so please visit the site before you need the information. DES has also added new information to the site, including statewide topographic maps and digital orthophotos. You can visit the site at www.des.state.nh.us/gis/onestop/.

Spotlight on ... Peterborough

Gasoline spill underscores value of preparedness

By Edwin Betz, P.E., Director of Public Works, Town of Peterborough

As most water supply purveyors know, their next emergency is only a telephone call away. Peterborough had such an experience on a subzero morning this past January. A police officer found a driver unloading gasoline at a station in downtown Peterborough ankle deep in gasoline. The gasoline was flooding nearby storm drainage catch basins (CBs) and explosive gas vapors drifted above streets and into buildings. Quick action by the Fire Department and Mutual Aid averted a disaster when electrical power was shut off and the downtown cordoned off to only emergency personnel. Booms were placed at the outfall of the stormwater collection system on the nearby Contoocook River. Downstream of the outfall is the Town's north aquifer on which three municipal wells are located. The Summer Street well, located only 100 feet from the river, was shut down immediately to avoid drawing contaminants into the aquifer. GIS mapping of the storm drains was helpful in responding quickly, as sand was dumped in appropriate CBs to slow the flow of gasoline to the river.

There is much to learn from Peterborough's experience. Alternate sources of supply are critical in an emergency, as the Summer Street well was kept off-line for five and a half months until MtBE was below detection in the Contoocook River. The entire downtown was closed for a full day following the spill. One store remained closed for four to five months due its location on top of an old, incompletely filled underground canal (associated with the town's historic mills), which served as a conduit for the gasoline and vapors to enter the building. Certainly the value of mutual aid and good GIS mapping of the infrastructure cannot be overemphasized.

With the assistance of a grant from DES, the Town and a consultant are developing zoning amendments requiring best management practices for stormwater runoff, such as hooded CB outlets, the availability of rubber mats to cover CBs, and absorbent booms at gas stations.

Guest Articles in The Source

Our thanks to Ed Betz from the Town of Peterborough for this guest article. The Drinking Water Source Protection Program invites authors who would like to propose a source protection article for this newsletter to view our "Guidelines for Guest Articles" at www.des.state.nh.us/dwspp/newsltr.htm.

DES Says Goodbye to Sherry Godlewski

The Drinking Water Source Protection Program recently bid farewell to our colleague, Sherry Godlewski. Sherry was responsible for developing and administering DES's Water Supply Land Conservation Grant Program. Under Sherry's guidance, the program has permanently conserved more than 3000 acres of critical water supply land since its beginning in 2000. Prior to her time with this program, Sherry spent several years as DES's Watershed Coordinator and Recycling Coordinator.

In addition to her regular duties, Sherry was known throughout the agency for her role on several Department committees including DES's Green Team, Outreach Committee, and Website Editorial Board. Many school-aged children in New Hampshire are also indebted to her for the leadership role she played in creating DES's EcoNet camp.

We wish Sherry well as she continues to "save the planet" and New Hampshire lands through her new position as Executive Director of Bear-Paw Regional Greenways, a land trust whose efforts focus on protecting lands within a proposed greenway stretching from Bear Brook to Pawtuckaway State Parks in southeastern New Hampshire.

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What Can Water Suppliers Do About Agriculture?

Agricultural land cover is one of 13 categories used in DES's Drinking Water Source Assessment Reports. One in three community water sources received a "High" vulnerability rating (for 10 percent or more agricultural land cover in its source protection area), and 84 percent received either a "High" or "Medium" rating. The numbers are even higher for non-transient, non-community systems (see table below). While a "High" or "Medium" rating does not necessarily mean agriculture poses a threat to a source(s), it does warrant further investigation.

Why is agriculture a potential concern? For groundwater sources, the main concerns are pesticides and nitrates/nitrites (from fertilizers). For surface sources, the concerns also include sediment, phosphorus (from fertilizers and sediment), organic carbon (which can contribute to the formation of disinfection byproducts), and pathogenic organisms such as bacteria and protozoa.

This past spring, DES distributed a new fact sheet, *Protecting Drinking Water Sources Based on Source Water Assessments*, designed to help water suppliers identify appropriate protection measures based on the types of threats that rated high in their Source Assessment Reports. For agricultural land cover, the fact sheet identifies education and programs to voluntarily implement best management practices (BMPs) as typical management measures.

First, it is important to understand what the threat category, "agricultural land cover" means. To give each source a rating for this category, DES used satellite images, processed by computer to interpret the land cover type (forest, cropland, urban) based on the amount and colors of light reflected by the land. This method is not always accurate, so it is important for water suppliers to "ground-truth" the information with a drive-through survey of the area.

Not all agricultural land uses necessarily pose a potential threat to a source. Sixty percent of the farm land in New Hampshire is pasture or hayfields that see very few chemical inputs – typically no more than a light fertilizer or manure application in the spring. Very rarely are hayfields or pastures treated with pesticides. Sparsely grazed pastureland is also likely to pose little or no contamination risk, especially if separated from surface water with adequate natural buffers. Row crops are more likely to pose a potential threat, and livestock operations – particularly concentrated animal feeding operations – probably pose the greatest risk to water quality if not properly managed.

Once you have determined that agricultural activities are taking place in your source protection area, your next step is to find a partner to help you reach out to farmers. Your best bet is the county conservation district (CCD) office. (CCD offices are generally listed in the white pages under the county name.) CCD staff are usually familiar with the farm operations in their area, and are invaluable partners in the next step, which is approaching individual farmers to let them know they are in your source protection area and to look for opportunities to implement best management practices (BMPs).

On-farm BMPs include integrated pest management (to reduce pesticide use), nutrient management and animal waste management (e.g., soil testing, manure storage and judicious application), grazing management (e.g., fencing to keep livestock away from streams and streambanks), runoff management (e.g., barnyard drainage improvements, settling basins, constructed wetlands), and vegetated buffers along water bodies. To make it easier to institute BMPs, both DES and New Hampshire's Department of Agriculture, Markets and Food offer grants for farmers to implement these measures. For information about the grants, visit www.des.state.nh.us/dwspp/Agricultural_grants.htm or contact Richard Uncles at 271-3685 or runcles@agr.state.nh.us.

	High	Medium	Low
Community Systems	32%	52%	16%
Non-transient, Non-community Systems	46%	46%	8%

Vulnerablity Ratings for Agricultural Land Cover for N.H. Public Water Supply Sources.

Save the Dates! Stormwater Management *and* River and Watershed Conferences

Two important water resources conferences are coming up in early November.

The first focuses on new methods for managing stormwater to achieve such benefits as increased groundwater recharge, reduced pollution, decreased construction costs, greater retention of existing vegetation, and a more attractively landscaped development. The conference will be held November 6 and 7 at the Montshire Museum in Norwich, Vermont, and features national and state experts on stormwater management and low-impact development. Daytime workshops, geared toward planners and site designers, will cover principles, techniques, and implementation of innovative stormwater management. An evening meeting on November 6 at 7 p.m. will include a more general discussion of stormwater and what local officials can do to "keep stormwater where it falls." The featured speaker will be Larry Coffman of the Department of Environmental Resources in Prince George's County, Maryland, a leader in low-impact development. For more information, contact Victoria Boundy, Upper Valley Lake Sunapee Regional Planning Commission, at 448-1680 or vboundy@uvlsrpc.org.

The second event is the annual River and Watershed Conference, scheduled for November 9 at the DES building in Concord. A great opportunity for water suppliers and river and watershed activists and professionals to network and learn, the conference will include four tracks: protecting watersheds threatened by development; community involvement; technical tools of the trade; and New Hampshire waters. Attendees can choose from among 16 workshops focusing on such topics as low-input landscaping for stormwater management, holding a successful river celebration, technical tools such as biomonitoring and geographic information systems, and quantifying the economic value of water resources. The afternoon will feature panels on exotic species and success stories of local advisory committees. For more information, contact Beth Krumrine at DES at 271-8811 or bkrumrine@des.state.nh.us or visit www.des.state.nh.us/rivers.

No Trespassing Signs Available from DES

The Water Supply Engineering Bureau has a limited number of "No Trespassing" signs available for posting on water supply lands. The 9x12 laminated posters warn of a fine up to $2000 or up to one year imprisonment for knowingly poisoning the source of a public water supply.

For more information about the signs or to receive free copies, contact Jessica Brock at 271-3303 or jbrock@des.state.nh.us.

Model Protection Ordinances Available from EPA

Communities may take for granted that a plentiful supply of high quality drinking water will always be available. However, drinking water sources, which are a vulnerable natural resource, need to be protected. One way to do this is for communities to enact source water protection ordinances. A section of EPA's website found at www.epa.gov/owow/nps/ordinance/sourcewater.htm has several resources to help communities develop such ordinances.

The website contains a model ordinance and five example ordinances from around the country for both groundwater and surface water source protection. While the models can act as examples, communities will need to assess what the appropriate requirements are for their area. Both financial and technical assistance is available from DES to aid communities in developing and implementing appropriate ordinances.

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